



FlashPoints



Hazardous Materials Transportation Safety Newsletter

Issue #7

Summer 2001

Upcoming TSI Classes in Oklahoma City:

Transportation of Hazmat

-Basic Aug 20-24, Oct 29-Nov 2, Jan 7-11, Mar 4-8**-Recurrent** (Refresher) Sep 24-26, Nov 27-29, Mar 19-21

Air Transportation of Hazmat

(ICAO/IATA) Sep 11-13, Dec 11-13, Mar 19-21

Vessel Hazmat / IMDG Code

Aug 6-9, Feb 26-Mar 1

Instructor Training

Sep 5-7, Nov 6-8, May 7-9

Cargo Tanks

Aug 13-17, Jan 14-18

Performance-Oriented

Packaging Oct 23-25, Feb 20-22

Haz Wastes & Substances

Dec 11-13, Feb 26-28

Radioactive Materials

Nov 13-16, May 7-10

Infectious Substances

Jul 11-12, Oct 24-25, Jan 23-24, Apr 24-25

Cylinders

Sep 5-7, Dec 5-7, Apr 10-12

Explosives

Jan 15-18

Customized and on-site training also available

For more information, or to receive a training brochure, please contact the TSI Hazardous Materials Division. Contact information is below.

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July 1st Ushers in New Regulations for Air Transport of Hazmat

In previous issues of *FlashPoints* we discussed the major changes in the ICAO/IATA hazmat regulations coming down the pike. As of July 1st, the 2001-2002 ICAO Technical Instructions are in effect. Therefore, so to are those portions of the IATA *Dangerous Goods*

Jon Carter
TSI

Regulations (an industry publication) that had been highlighted in grey and marked with a calendar symbol. On that same theme, portions of the IATA DGR that had been marked with an hourglass symbol are now expired and should no longer be used. The arrival of July 1st was not the

(July 1st, continued on page 3)

New Radioactive Regs Arrive Piecemeal IAEA's TS-R-1 (ST-1) Still Superseded by 49 CFR

In the Final Rule published on June 21, 2001, the IAEA TS-R-1 (ST-1 1996 Revised) was incorporated by reference into 49 CFR and also approved for use via the latest ICAO Technical Instructions. This final rule also modified the approval for the IMDG Code that was published in HM-215D earlier this year. While this gives many a sigh of relief, don't breathe too deeply yet.

Jeff McGhee
Argonne National Laboratory
TSI Associate Staff

Use of the new IAEA regulations is restricted by 49 CFR 171.12(d) to in-

ternational shipments only. The DOT has retained the "old" IAEA regulations for domestic transportation. And though use of the ICAO and IMO regulations for domestic air and sea shipments is allowed by 49 CFR sections 171.11 and 171.12, those sections retain the DOT definition of *radioactive material* and the DOT A_1 and A_2 values.

The new IAEA definition for *radioactive material* requires that the material has both an activity concen-

(Radioactive, continued on page 2)

TSI Motor Carrier Safety Moves to New Division

With the departure of Bill Syme, the Program Manager for Motor Carrier Safety, the TSI Motor Carrier Safety Program has been reorganized and is now part of the TSI Special Programs Division (DTI-100). Courses and seminars on the Federal Motor Carrier Safety Regulations will resume in August. For class scheduling and other information please contact Lisa Willett at 405-949-0036 x379, or visit the TSI web site at <http://www.tsi.dot.gov>. *FlashPoints* will continue to carry articles on motor carrier safety that are hazmat-related.

Note: Bill Syme took a position in industry with Penske Trucking. ♦

(*Radioactive*, continued from page 1)

tration AND total activity in the consignment which exceed the values listed in the A tables. This means you can have a material with an activity concentration greater than that listed, but less total activity in the consignment and are now considered non-radioactive.

What does this mean to you when using this new set of "combined" regulations? It means you will have to start by looking at the retained definition of *radioactive material* that is in 49 CFR 173.403. The final rule specifically retains the current definition of *radioactive material* for all transport including ICAO and IMDG shipments. So if you have a shipment of Tc99, which under the TS-R-1 has an activity concentration for exempt material of 10,000 Bq/g, you will still be regulated at 70 Bq/g by the DOT. In addition, if your *consignment* is considered non-radioactive by the IAEA definition but you exceed the specific activity/activity concentration in 49 CFR you are still regulated.

So what do you do when the material is regulated by IAEA (read ICAO and IMDG) and not by the HMR? Well, that depends on where you are shipping to/from. Lets say that you have Co60 with a specific activity, or activity concentration, of 69 Bq/g with a total activity in the consignment of 100,001 Bq. Under the current HMR you are not regulated. However under the IAEA you would be regulated. So for an export or import shipment you will have a regulated material in those countries that have adopted TS-R-1 and in the U.S. you will have a non-regulated shipment.

As if this weren't complicated enough, the current Type A limits in 49 CFR are unchanged and must still be used as already specified in 171.11 and 171.12. For the Tc99 this means no change, but for Cs134 the values in the IAEA will be higher than allowed in 49 CFR. This will have an impact on not only Type A and Type B packages but also on determinations for Limited Quantity, Low Specific Activity and Surface Contaminated Objects since all start with an A value. So if you are shipping *any* radioactive material you will have to check the A tables in both sets of the regulations.

The new proper shipping names (PSNs) found in TS-R-1 have been added to the hazardous materials table in 49 CFR, but with an "I" (international) in Column 1. All current entries have been modified to have a D (domestic) in Column 1.

Special provision 139 was added for the IAEA PSNs "Radioactive material transported under special arrangement, fissile", and "Radioactive material transported under special arrangement, non-fissile", that states that domestic transport under these two PSNs would only be allowed under a DOT exemption.

The application of criticality controls remains con-

stant with the IAEA TS-R-1 with a slight change in the wording. What is called a *Transport Index* or *TI* in 49 CFR is now broken out into two different terms under then IAEA. Under IAEA the Transport Index/TI is determined by dose rates from specified distances from the package, same as the first determining criteria in 49 CFR. They have added *Criticality Safety Index*, or *CSI*, which is determined much in the same way that you do for TI in 49 CFR for fissile materials packages: The number of packages which can be safely transported while remaining subcritical divided by 50. A new Fissile hazard label displaying the CSI is also used.

The proposed rule HM-230 (incorporating TS-R-1 into 49 CFR for all radioactive shipments) is still out there. Until HM-230 is published as a Final Rule, the current DOT regulations for radioactive materials will continue to be used for domestic ground transportation in the US and the DOT's A_1 and A_2 values and definition of *radioactive material* will continue to impact international shipments as well as domestic ICAO (IATA) and IMDG Code shipments. ♦

HM-215D Moves HMR Closer To International Regulations

The HM-215D Final Rule doesn't just incorporate the latest international regulations by reference, it actually makes many changes to the US DOT Hazardous Materials Regulations (HMR), bringing domestic rules in closer alignment with the latest *IMDG Code*, *ICAO Technical Instructions*, and *UN Recommendations*. The effective date of this final rule is October 1, 2001, but voluntary compliance is allowed as of June 21st—except for the use of the 2001-2002 *ICAO Technical Instructions* and IAEA *TS-R-1 (ST-1)* regulations for radioactive materials which are authorized for use July 1st. What this means is that many of the new changes that come into effect on July 1, 2001, with the new *ICAO Technical Instructions* will actually have already been acceptable for all modes of transportation in the US for nine days. These changes include:

- No difference between primary and subsidiary hazard labels and placards (5-year transition period for this in 49 CFR)
- Displaying one explosive placard when several compatibility groups are present
- "Stabilized" replaces "inhibited" in many PSNs
- Many domestic entries with NA numbers removed from the Hazardous Materials Table since corresponding UN entries are available
- Vessel hazmat shipping papers must show flashpoint if it is below 60.5° C (141° F)—IMDGC had this for many years
- Special Provisions revised greatly due to new UN portable tank and IBC provisions

(HM-215D, continued on page 4)

New Registration Year Is Here, Lower Registration Fees Are Not



Under a proposed rulemaking (HM-208D) RSPA had considered lowering the DOT hazmat registration fees paid by offerors and carriers (see *FlashPoints* Winter 2000-2001). However, this idea is on hold until RSPA's hazmat budget for fiscal year 2002 is established. So when the new registration year begins July 1st, DOT hazmat registration fees for those required to be registered will be the same as last year: \$275 for a "small business" and \$1975 for other than a small business. A \$25 registration fee also applies for each registration (registering for multiple years in advance saves money since the \$25 fee is per registration statement, not per year). Did the new registration year sneak up on you? Expedited registrations are available for \$50 more.

The DOT hazmat registration regulations are detailed in 49 CFR, Part 107, Subpart G (107.600's). More information and registration forms are available at <http://hazmat.dot.gov/register.htm> or call 202-366-4109. ♦

(July 1st, continued from page 1)

only prerequisite for using the new regulations. The US DOT also had to accept the use of the 2001-2002 ICAO Technical Instructions. Though 49 CFR 171.11 accepts the use of ICAO, 171.7 tells which edition of the ICAO regulations that 171.11 is referring to. It wasn't until June 21, 2001, that the DOT added the 2001-2002 ICAO Technical Instructions to 171.7. Without such a move the new requirements of the ICAO hazmat regulations (and new IATA hazmat regs based on ICAO regs) could not have been used in the US.

As mentioned in earlier newsletters, the biggest changes have to do with radioactive materials (see article in this newsletter) and labeling (subsidiary hazard labels now keep the class number). Here are a few of the other changes to the ICAO/IATA regs as of July 1st:

- The segregation chart (Table 7-1 in ICAO, Table 9.3.A in IATA) has become less restrictive.
- There is a new "sample" proper shipping name rule that allows the use of a generic shipping name without adding the technical/chemical name in parentheses (previously only possible under USG-14). This rule does not apply to hazard classes 1, 6.2, or 7.
- The word "inhibited" is changed to "stabilized" in proper shipping names.
- UN 3363 replaces ID 8001 for "Dangerous Goods in Apparatus/Machinery".
- "Printing ink related material" (class 3, UN1210) is a new entry in the Dangerous Goods List (DGL).

(July 1st, continued on page 4)

Does DOT Hazmat Documentation Have To Be On Paper?



A DOT Clarification

In this age of information technology the transportation industry is increasingly moving to paperless communications. Computers are even appearing in the cabs of trucks. Because of this, we are often asked if documentation required by the US DOT Hazardous Materials Regulations (HMR) may be in electronic format. The DOT addressed this issue in a recent letter of clarification. Here is an excerpt from that letter (Ref.# 00-0344):

"Unless specifically prohibited in the HMR, electronic methods of submitting reports, paperwork, and recordkeeping is authorized. For example, the HMR requires that a hard copy of the shipping paper/manifest be carried on the transport vehicle when transporting hazardous material; however, electronic retention of a shipping paper/manifest is authorized. Other forms of paperwork, reports, certifications, etc., required by the HMR are permitted to be submitted and maintained electronically."

So, unless the HMR say otherwise, you can go electronic. Just make sure you can access those electronic files when you need them. You can see this letter in its entirety and view and print other DOT letters of clarification at: <http://hazmat.dot.gov> under the "Rules & Regulations" section. ♦

(July 1st, continued from page 3)

- There's a new division 1.4 entry (UN0503) in the DGL for pyrotechnic airbags and seatbelt pretensioners that can't be reassigned to class 9.
- The PG entry is dropped for several PG III "Battery..." proper shipping names (they either require PG II packaging or no UN packaging).
- Special Provision (SP) A8 explains when lithium ion batteries are excepted from the regulations.
- SP A81 extends its quantity exceptions for infectious substances to all bodily fluids.
- SP A114 details the exceptions for shock absorbers that contain compressed gas.
- SP A124 explains that "Air, compressed" does not include mixtures with more than 23.5% oxygen. The oxidizer label does not apply.
- SP A125 lists the criteria for determining the different "Matches" proper shipping names.

There are many more new ICAO/IATA hazmat requirements as of July 1st. ICAO does not give a transition period for compliance. So if you're involved in the air transport of hazmat make sure you have reviewed the new changes. ♦

HAZMAT TRANSPORTATION —Where Does it Begin and End?

The DOT hazardous materials regulations (HMR) apply to "transportation in commerce." The HMR also cover "storage incidental to transportation", "loading", and "unloading". But what do all these terms really mean? Is a package "in transportation"—and subject to DOT inspection—when it's on the loading dock? Does storage "incidental to transportation" cover distribution warehouses? At what point does transportation officially begin and end? An RSPA Notice of Proposed Rulemaking (NPRM) is seeking to clarify all this once and for all.

Docket # RSPA-98-4952 (HM-223) appeared in the Federal Register on June 14th, 2001. You can view it at <http://hazmat.dot.gov/rulemake.htm#nprm>. The DOT is accepting comments on this NPRM until October 12, 2001. Comments can be mailed to DOT or can be made on-line at <http://dms.dot.gov>. (You'll need to reference the last four digits of the docket #: 4952.)

This rulemaking will have a major impact on how and when DOT hazmat regs are enforced. Which means everyone involved in hazmat transportation will be affected. So send your comments to the DOT! ♦



(HM-215D, continued from page 2)

- New "sample" PSN rule is adopted (Classes 1, 6.2, and 7 ARE included, despite their exclusion in the int'l regs)
- IBC standards updated
- UN portable tanks standards added. Grandfather provisions made for continued use of DOT 51, DOT 57, DOT 60, IM 101, and IM 102 portable tanks. DOT 52 and DOT 53 portable tanks eliminated
- Rules for cigarette lighters and alcohol carried by aircraft passengers and crew updated and clarified
- Segregation table for aircraft becomes less restrictive
- Lithium battery restrictions and exceptions further defined and clarified

There are hundreds of more little changes. The changes become effective October 1, 2001. Unless otherwise stated, there is a one year transition period for compliance until October 1, 2002. ♦

Don't Throw Out That Typewriter! Operator Variation FX-12 Now in Effect

Many hazmat shippers have been concentrating on the July 1 date for the new ICAO/IATA changes to take effect. Concentrating so hard in fact that another important deadline may have slipped by unnoticed. As of June 1, 2001, Federal Express will no longer accept Shipper's Declarations that are handwritten. They must be typewritten or computer generated.



There are some exceptions to this FedEx requirement: Shipments may have the name and address of the shipper and consignee, air waybill, airport of destination, RQ, technical name, quantity, name/title, signature and place/date entered by hand on the declaration. Radioactive shipments may also have entered by hand the activity, label category, transport index, and dimensions.

Carriers/operators have the right to create more restrictive requirements than the actual hazardous materials regulations specify. This FedEx requirement does not appear in the operator variations in the published 2001-2002 ICAO Technical Instructions but is found in the IATA *Dangerous Goods Regulations* under operator variation # FX-12. ♦



ADR/RID on the WWW

Wondering about "tremcards" or other European hazmat developments? The European Chemical Industry Council (CEFIC) provides a helpful web site for those who need information on the developments in the European road and rail hazmat regulations (ADR and RID):

<http://www.cefic.org/activities/logistics>